

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 3 and 5-13 are pending in this application. Claims 1, 3, 5, 7-10 and 13 are amended by the present amendment. Support for the amended claims can be found in the original specification, claims and drawings.¹ No new matter is presented.

In the Office Action, Claims 1, 7-9 and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over Onoe et al. (Computer Communications, vol. 21, no. 14, XP-004146583, pp. 1226-1243 “Media Scaling Applied to Multicast Communications”, September 15, 1998, hereinafter Onoe) in view of Lundby (U.S. Pat. 6,856,604); and Claims 3, 5, 6 and 10-12 were rejected under 35 U.S.C. § 103(a) as unpatentable over Onoe in view of Lundby and further in view of Hundscheidt et al. (U.S. Pub. 2002/0085506, herein Hundscheidt).

The Office Action rejected Claims 1, 7-9 and 13 under 35 U.S.C. § 103(a) as unpatentable over Onoe in view of Lundby. In response to this rejection, Applicants respectfully submit that amended independent Claims 1 and 9 recite novel features clearly not taught or rendered obvious by the applied references.

Amended independent Claim 1, for example, recites a communication system for transmitting multicast data to a plurality of mobile stations in a multicast group, the system comprising:

a category manager configured to store a reception capability value showing a reception capability necessary for receiving multicast data in each of the mobile stations and a category corresponding to the reception capability;

a reception capability collector configured to collect reception capability values of each of the mobile stations; and

a transmitter configured to transmit the multicast data ***using a transmission method corresponding to a first category and a transmission method corresponding to a second category, when both a reception capability value corresponding to the first category and a reception***

¹ E.g., specification, Fig. 2, p. 7, ll. 20-26 and p. 10, ll. 15-17.

capability value corresponding to the second category are collected by the reception capability collector.

Independent Claim 9, while directed to an alternative embodiment, is amended to recite similar features. Accordingly, the remarks and arguments presented below are applicable to each of independent Claims 1 and 9.

Turning to the applied primary reference, Onoe describes a cooperative control method for end-to-end quality of service (QoS) control at transport layers and point-to-point control at network layers.² Onoe's method also includes QoS presentation functions including QoS level scheduling at application layers and establishment of QoS connections over ATM at data link layers to make the best use of the middle layers QoS controls.³ Onoe further describes that QoS levels of receiver application requirements are stored, and that a transmission method corresponding to the QoS level of the receiver application requirements is determined.⁴

Onoe, however, fails to teach or suggest that his system includes "a transmitter configured to transmit the multicast data ***using a transmission method corresponding to a first category and a transmission method corresponding to a second category, when both a reception capability value corresponding to the first category and a reception capability value corresponding to the second category are collected...***" as recited in amended independent Claim 1.

As discussed above, Onoe describes that data is transmitted using a transmission method corresponding to the QoS (e.g., category) of the receiver application requirements. Onoe, however, fails to teach or suggest that his system is configured to multicast data to a plurality of receivers that have different application requirements. In other words, Onoe fails to teach or suggest that his system is capable of collecting "***both a reception capability value***

² Onoe, Abstract.

³ Id.

⁴ Id., § 2.2.1

corresponding to a first category and a reception capability value corresponding to a second category,” whatsoever, much less that data is transmitted using both the first and second categories. Otherwise stated, Onoe fails to teach or suggest how a transmission method is selected when the recipients of the same data (e.g., multicast) have different application requirements.

Lundby, the secondary reference, describes a communication system for transmitting multicast data to mobile stations. More particularly, Lundby describes collecting channel quality information of a plurality of mobile station in the multi-cast group, and selecting an optimal transmission method corresponding to the worst channel quality among the collected channel quality information.

Thus, Lundby merely describes that the multicast data is transmitted using a single transmission method corresponding to the worst channel quality among the channel quality collected from the users, and fails to teach or suggest transmitting multicast data using two different transmission methods, as claimed.

Therefore, Onoe and Lundby, neither alone, nor in combination, teach or suggest transmitting “multicast data *using a transmission method corresponding to a first category and a transmission method corresponding to a second category, when both a reception capability value corresponding to the first category and a reception capability value corresponding to the second category are collected...*,” as recited in independent Claim 1.

Accordingly, Applicants respectfully request that the rejection of Claim 1 (and claims that depend therefrom) under 35 U.S.C. § 103 be withdrawn. For substantially similar reasons, it is also submitted that independent Claim 9 (and the claims that depend therefrom) patentably define over Onoe and Lundby.

With regard to the rejection of Claims 3, 5 and 6 under 35 U.S.C. § 103 as unpatentable over Onoe, Lundby and Hundscheidt, it is noted that Claims 3, 5 and 6 ultimately depend from Claim 1, and are believed to be patentable for at least the reasons

discussed above. Further, it is respectfully submitted that Hundscheidt fails to cure any of the above-noted deficiencies of Onoe and Lundby.

Accordingly, Applicants respectfully request that the rejection of Claims 3, 5 and 6 under 35 U.S.C. § 103 be withdrawn.

Independent Claim 10 (and Claims 11-12, which depend therefrom) were rejected under 35 U.S.C. §103(a) as unpatentable over Onoe in view of Lundby and Hundscheidt. In response to this rejection, Applicants respectfully submit that amended independent Claim 10 recites novel features clearly not taught or rendered obvious by the applied references.

Independent Claim 10 recites a mobile station for receiving multicast data, the station comprising:

- a category memory configured to store a category to which a reception capability value of the mobile station belongs...

- a selector configured to select multicast data corresponding to the category stored in the category memory from among the received multicast data,

- wherein the category to which a reception capability value of the mobile station belongs is defined by at least one of a demodulation method, a reception buffer size, a processing capability, a decoding method, a interleaving length, a number of despanders and a number of decoders.

In rejecting the claimed features directed to the category memory in the mobile station, the Office Action concedes that Onoe and Lundby fail to disclose the claimed “category memory” feature. In an attempt to remedy this deficiency, the Office Action relies on Hundscheidt and asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the cited references to arrive at Applicants’ claims. In response, Applicants respectfully submit that Hundscheidt fails to disclose the more detailed features defining the category to which a reception capability value of the mobile station belongs, as recited in amended independent Claim 10.

Hundscheidt describes a mobile station (sub-branch) for receiving multicast data. More particularly, paragraphs [0011]-[0012] of Hundscheidt describe that the mobile stations select and receive multicast data in the category (class) corresponding to “wireless

environments between the mobile stations and base stations” from among transmitted multicast data in every category (e.g., a first client receives only A1, a second client receives A1 and A2).

Therefore, Hundscheidt describes that the mobile stations select multicast data in a category (class) corresponding to wireless environments between the mobile stations and base stations, but fails to teach or suggest that the mobile stations select the multicast data corresponding to the capable of receiving category (class) ***based on the reception capability values of the mobile stations***.

As noted above, Claim 10 is amended to further specify that the category to which a reception capability value of the mobile station belongs is defined by “***at least one of the demodulation method, a reception buffer size, a processing capability, a decoding method, a interleaving length. a number of despreaders anta number of decoders.***” This value is defined as a preset value, which is preset at the mobile station, and not affected by radio environment between the mobile stations and a radio station.

Onoe, Lundby and Hundscheidt, neither alone, nor in combination, teach or suggest “select[ing] multicast data corresponding to the category stored in the category memory from among the received multicast data, wherein the category to which a reception capability value of the mobile station belongs is defined by at least one of a demodulation method, a reception buffer size, a processing capability, a decoding method, a interleaving length, a number of despreaders and a number of decoders,” as recited in amended independent Claim 10

Accordingly, Applicants respectfully request that the rejection of Claim 10 (and claims that depend therefrom) under 35 U.S.C. § 103 be withdrawn.

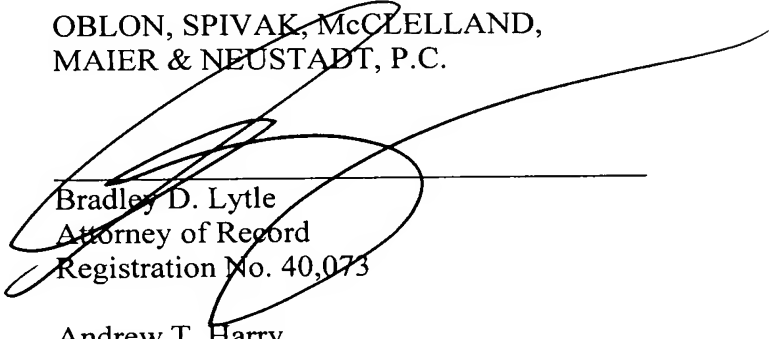
Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1, 3 and 5-13 is definite and patentably distinguish over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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